

Remarks/Arguments:

This Amendment adds no new claims, and is provided to amend claims 1, 4, 5 and 8-10. No new matter has been added. Upon entry of this Amendment, claims 1-15 will be pending.

Objection to the Claims

The Examiner has objected to claim 1. Accordingly, the Applicants have amended claim 1 as suggested by the Examiner, and respectfully request the withdrawal of the objection to claim 1.

The Applicants have also amended the specification to correct a number of typographical errors. Paragraph 18 has been amended to more closely reflect the specification elsewhere, for example, paragraph 47. Paragraph 21 has also been amended to more closely reflect the specification elsewhere, for example, paragraph 98 and claim 10. The Applicants have also amended the Abstract to delete the occurrence of the word "comprising".

Rejections of the Claims under 35 U.S.C. 102

The Examiner has rejected claim 15 under 35 U.S.C. 102(b), as being anticipated by U.S. Patent No. 5,812,172, issued to Yamada et al. (hereinafter Yamada). Specifically, the Examiner points to Yamada as disclosing a system for performing an inkjet machine function that comprises at least one scanner unit fixed to a printer carriage unit via a scanner fixing unit, the fixing unit provided to communicate at least one of a first, second and third linear motion and a first rotational motion to the scanner unit, at least one controller provided to control the scanner to travel between a first position for scanning a document and a second position for scanning a sheet of paper via the first linear motion, the controller further provided for controlling the scanner to rotate between a first direction for scanning a document and a second direction for scanning a sheet of paper via the first rotational motion, and at least one printer carriage to travel via the second and third linear motion for achieving at least one function comprising printing a sheet of paper, scanning a sheet of paper and

scanning a document, purportedly anticipating the invention as described by the Applicants in claim 15.

The Yamada reference discloses a system and method for moving an image sensor and a print head carriage both along a scan direction (see path A-B of Fig. 2A), wherein the image sensor can also be moved in perpendicular direction to be closer to a document (see path D-E of Fig. 2A). In doing so, focal error can be reduced since the gap between the image sensor and the platen is minimized.

However, the Applicants describe a scanner fixed to the printer carriage via a scanner fixing unit which can communicate, in addition to other linear motions, a first rotational motion to the scanner unit. That is, the rotational motion is recited as an exemplary method to rotate the scanner between first and second directions, for example, 0 and 180 degrees. In contrast, the sensor moving means of the Yamada reference is disclosed as simply moving the sensor along a shaft in a direction toward the document (see col. 4, lines 24-28). There is no disclosure in the system and method of Yamada for providing a rotational movement of the sensor, but simply a linear movement.

Further, the Applicants describe a controller provided for controlling the scanner to rotate between the first direction for scanning a document, and the second direction for scanning a sheet of paper via the rotational motion, for example, between 0 and 180 degrees. The sensor moving means of the Yamada reference is disclosed as simply moving the sensor along a shaft in a direction toward the document and there is no disclosure in the system and method of Yamada for providing a controller for controlling rotational movement of the sensor, but simply a linear movement.

For these reasons, the Applicants assert that the Yamada reference does not disclose or reasonably suggest each element as claimed by the Applicants in independent claim 15. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 102(b) of independent claim 15.

Rejections of the Claims under 35 U.S.C. 103

The Examiner has rejected claims 1-7 and 12 under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of U.S. Patent No. 6,488,353, issued to Itoyama et al. (hereinafter Itoyama). Specifically, the Examiner points to Yamada as disclosing the claimed invention with the exception of the scanner unit to perform a scanning operation that comprises at least one sensing face, and a printer unit having a carriage to move a print head for jetting ink onto a sheet of paper so as to perform a printing operation. The Examiner points to Itoyama as disclosing the scanner unit to perform a scanning operation and having at least one sensing face, and a printer unit having a carriage to move a print head for jetting ink onto a sheet of paper so as to perform a printing operation, purportedly rendering obvious the invention as described by the Applicants in claim 1 and a method thereof, purportedly rendering obvious the invention as described by the Applicants in claim 12.

However, the Applicants have amended claim 1 to recite that an exemplary scanner is rotatable between at least a first and second direction. That is, in addition to being movable between the first and second position, the scanner is rotatable between at least first and second directions. The Applicants have amended dependent claims 4, 5 and 8-10 in view of the amendments to claim 1.

Independent claim 12 describes a method of securing a scanner to the printer carriage via a scanner fixing unit which can communicate, in addition to other linear motions, a first rotational motion to the scanner unit. That is, the rotational motion is recited as an exemplary method to rotate the scanner between first and second directions, for example, 0 and 180 degrees.

In contrast, both the Yamada and Itoyama references fail to disclose or reasonably suggest a rotatable scanner or a method of securing a rotatable scanner. As noted above, the sensor moving means of the Yamada reference is disclosed as simply moving the sensor along a shaft in a direction toward the document (see col. 4, lines 24-28). There is no disclosure in the system and method of Yamada for providing a rotational movement of the sensor, but simply a linear movement. Further, the Itoyama reference simply discloses a system and method for providing a carriage-integrated type scanner for the diagnosis of

defects in a print head. There is no disclosure in the system and method of Itoyama for providing a rotational movement of the sensor, but simply linear movement with the carriage.

Accordingly, as Yamada and Itoyama do not disclose or reasonably suggest each element of Applicants' independent claim 1 as amended and claim 12, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of independent claims 1 and 12. The Applicants also respectfully request the withdrawal of the rejection of dependent claims 2-7, which depend from independent claim 1, for the same reasons.

Regarding claims 2 and 3, the Examiner, in addition to the reasons stated above, further points to Itoyama as disclosing a document that comprises at least one scan surface from which data is received, purportedly anticipating the invention as described by the Applicants in claim 2, and disclosing a paper that comprises at least one print surface upon which data is transferred, purportedly anticipating the invention as described by the Applicants in claim 3.

However, for the reasons stated above, the Applicants assert that the Yamada and Itoyama references do not disclose or reasonably suggest each element of Applicants' independent claim 1 as amended, from which claims 2 and 3 depend. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 2 and 3 for the same reasons.

Regarding claim 4, the Examiner points to Yamada as disclosing the claimed invention, purportedly rendering obvious the invention as described by the Applicants in claim 4. Specifically, the Examiner points to the motor 45 of the driving mechanism 44 as rotatable in forward and reverse directions.

However, the Applicants have amended claims 1 and 4 to recite that the exemplary scanner is rotatable between at least a first and second direction. That is, in addition to being movable between the first and second position, the scanner is rotatable between at least first and second directions.

As noted above, both the Yamada and Itoyama references fail to disclose or reasonably suggest a rotatable scanner. The sensor moving means of the Yamada reference is provided to simply move the sensor along a shaft in a direction toward the document (see col. 4, lines 24-28), which is driven by the reversible rotation of the motor 45. However, the rotation of the motor 45 does not disclose or reasonably suggest a rotatable scanner. In fact, the rotation of the motor 45 is translated into a linear motion of the image sensor 24 (see col. 4, 49-52). Accordingly, Yamada does not disclose or reasonably suggest a rotatable scanner.

Further, the Itoyama reference simply discloses a system and method for providing a carriage-integrated type scanner for the diagnosis of defects in a print head. There is no disclosure in the system and method of Itoyama for providing a rotational movement of the sensor, but simply linear movement with the carriage.

Accordingly, as Yamada and Itoyama do not disclose or reasonably suggest each element of Applicants' independent claim 1 and dependent claim 4 as amended, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claim 4.

Regarding claims 5-7, the Examiner, in addition to the reasons stated above, further points to Yamada as disclosing a rotating member that comprises a first driving motor having a first rotating axis for immovably fixing the scanner thereon, purportedly anticipating the invention as described by the Applicants in claim 5, and disclosing a lifting member that comprises a lifting belt for fixing the first driving motor thereon, the lifting belt having a first and second end and a driving and a driven pulley each having an axis, and a second driving motor having a second rotating axis connected with an axis of the driving pulley, purportedly anticipating the invention as described by the Applicants in claim 6. The Examiner also points to Yamada as disclosing a fixer that comprises a plurality of brackets installed on the carriage to rotatably support the ends of the axis of the driven pulley and the ends of the axis of the driving pulley, purportedly anticipating the invention as described by the Applicants in claim 7.

However, for the reasons stated above, the Applicants assert that the Yamada and Itoyama references do not disclose or reasonably suggest each element of Applicants' independent claim 1 as amended, from which claims 5-7 depend. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 5-7 for the same reasons.

The Examiner has rejected claims 8-11, 13 and 14 under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Itoyama and further in view of U.S. Patent No. 6,633,414, issued to Matsuda et al. (hereinafter Matsuda). Specifically, the Examiner points to Yamada and Itoyama as disclosing the claimed invention with the exception of a rotating and lifting member for fixing and securing the scanner to be rotatable between a first and a second direction, and the rotating and lifting member further provided for fixing and securing the scanner to be ascendable or descendable to allow the scanner to maintain a desired sensing distance with respect to at least one of the document and the sheet of paper. The Examiner points to Matsuda as disclosing the rotating and lifting member, purportedly rendering obvious the invention as described by the Applicants in claim 8.

However, as noted above both the Yamada and Itoyama references fail to disclose or reasonably suggest a rotatable scanner. As noted above, the sensor moving means of the Yamada reference is provided to simply move the sensor along a shaft in a direction toward the document (see col. 4, lines 24-28). There is no disclosure in the system and method of Yamada for providing a rotational movement of the sensor, but simply a linear movement. Further, the Itoyama reference simply discloses a system and method for providing a carriage-integrated type scanner for the diagnosis of defects in a print head. There is no disclosure in the system and method of Itoyama for providing a rotational movement of the sensor, but simply linear movement with the carriage.

The Matsuda reference discloses a system and method wherein the scanner unit 6 is rotated during installation only. That is, as shown in Fig. 3, the scanner unit is set in place, then rotated into a locked position (see col. 5, lines 1-10). Accordingly, the Matsuda reference discloses a system and method wherein the scanner unit 6 is locked once installed

(see col. 5, lines 7-10), and does not disclose or reasonably suggest a rotatable scanner that is rotatable between a first and second direction, the first direction being a scanner orientation wherein the sensing face of the rotatable scanner is directed toward a scan surface of the document, and the second direction being a scanner orientation wherein the sensing face of the rotatable scanner is directed toward a print surface of the paper.

Accordingly, as Yamada, Itoyama and Matsuda do not disclose or reasonably suggest each element of Applicants' claims 1 and 8 as amended, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of claims 1 and 8.

Regarding claims 9-11, the Examiner, in addition to the reasons stated above, further points to Yamada as disclosing a third driving motor having a third rotating axis and a lifting part for fixing the scanner on the third rotating axis to ascend or descend the scanner according to the rotating operation of the third rotating axis, purportedly anticipating the invention as described by the Applicants in claim 9, and disclosing a lifting part that comprises at least one of a circular disk and a bar for immovably fixing the scanner, purportedly anticipating the invention as described by the Applicants in claim 10. The Examiner further points to Matsuda as disclosing a fixer that comprises at least one fixing bracket formed at the third driving motor and at least one screw member for fixing the fixing bracket at the carriage, purportedly anticipating the invention as described by the Applicants in claim 11.

However, for the reasons stated above, the Applicants assert that the Yamada, Itoyama and Matsuda references do not disclose or reasonably suggest each element of Applicants' independent claim 1 as amended, from which claims 9-11 depend. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 9-11 for the same reasons.

Regarding claims 13 and 14, the Examiner, in addition to the reasons stated above, further points to Matsuda as disclosing a method wherein the first and second linear motions are orthogonal, purportedly anticipating the invention as described by the Applicants in claim

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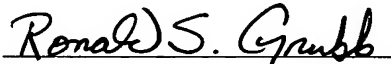
13, and disclosing a method wherein the second and third linear motions are orthogonal, purportedly anticipating the invention as described by the Applicants in claim 14.

However, for the reasons stated above, the Applicants assert that the Yamada, Itoyama and Matsuda references do not disclose or reasonably suggest each element of Applicants' independent claim 12, from which claims 13 and 14 depend. Accordingly, the Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. 103(a) of dependent claims 13 and 14 for the same reasons.

Conclusion

In view of the above, it is believed that the application is in condition for allowance and notice to this effect is respectfully requested. Should the Examiner have any questions, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,


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